

REMARKS

This amendment is submitted in furtherance of the telephone conversation with the Examiner of December 15, 2010, in which Applicant proposed to sharpen the claims.

The claims are being amended to better emphasize structural or operational distinctions of the invention over the prior art.

It is requested that, in considering the claims, if all claims are not deemed allowable, then the Examiner indicate allowable subject matter and allowable claims. This will facilitate the placing of the application in condition for allowance by Examiner's amendment or amendment by Applicant.

Regarding the prior art, the specification states that encoders have been used to measure substrate feed as part of the substrate feed system, wherein the signal from the encoder is used to control substrate feed through feedback to the substrate feed drive to try to reposition the substrate accurately adjacent a printing station in response to a calculated error. This prior art did not use this calculated error to control anything but the substrate feed. Applicant claims the using of this error, calculated as the difference between actual measured feed distance and the intended substrate feed distance, to affect a compensating movement of a printhead so as to more accurately compensate for the error.

The Examiner notes that the secondary *Gielen* reference discloses the general concept of making fine adjustments to compensate for errors in substrate feed by moving the printhead. But compensating printhead motion is carried out independently of the feed control system and without any calculation or knowledge of the moved distance of the substrate. The *Gielen* reference uses a printing of registration marks on the substrate and an adjusting for the error by finding the registration mark and moving the printhead relative to the located registration mark. *Gielen* does not use any measurement of actual substrate feed and calculation of a feed error to control in any way the printhead motion. This would be true even if an encoder were used in a closed loop system to control the substrate feed. *Gielen* does not need, and does not respond, to any measurement information.

Applicant uses measurement and calculated feed error to control movement of the printhead to make fine adjustments to compensate for feed errors. Applicant avoids the need to print registration marks that can degrade the printed images or require trimming that would waste substrate area.

The most structurally specific of the claims is apparatus claim 17, as dependent on claim 16 and claim 13. The limitations of claim 16 are illustrated in Fig. 3.

Method claim 7 is more detailed than method claim 1 in some respects, namely regarding the calculation of the error in substrate feed and the using of that calculation to control the distance that the printhead is moved to implement the correction. If some, but not all claims are deemed allowable, Applicant will consider canceling some claims to facilitate allowance of the application.

Method claim 1, on the other hand, is more explicit on the location of the measurement device and the moveable mounting of the printhead to a carrier on the bridge.

It is submitted that the claims, as amended, include features that render them patentable over the cited art. Allowance is respectfully requested.

Further, the withdrawn dependent claims to the non-elected species have been amended where necessary to be compatible with examined claims. It is submitted that they should be rejoined and allowed.

If the Examiner has any issues with the above claims, it is requested that he contact the undersigned counsel for Applicant by phone to resolve them.

Respectfully submitted,
WOOD, HERRON & EVANS LLP.

By: /Joseph R. Jordan /
Joseph R. Jordan, Reg. No. 25,686

2700 Carew Tower
441 Vine Street
Cincinnati, OH 45202
513/241-2324 (voice)
513/241-6234 (facsimile)